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(54) Barriers and like guards

(57) A portable barrier unit 17 consists of horizontal tubular members 11, 12 and 13 interconnected by upright members 14 and two secondary frames 24 and 25. The secondary frames are telescopically adjustable so as to vary the length of the unit and they are retain in a desired position by a locking means 31.

The main frame 17 is provided with vertically adjustable supporting feet 18.

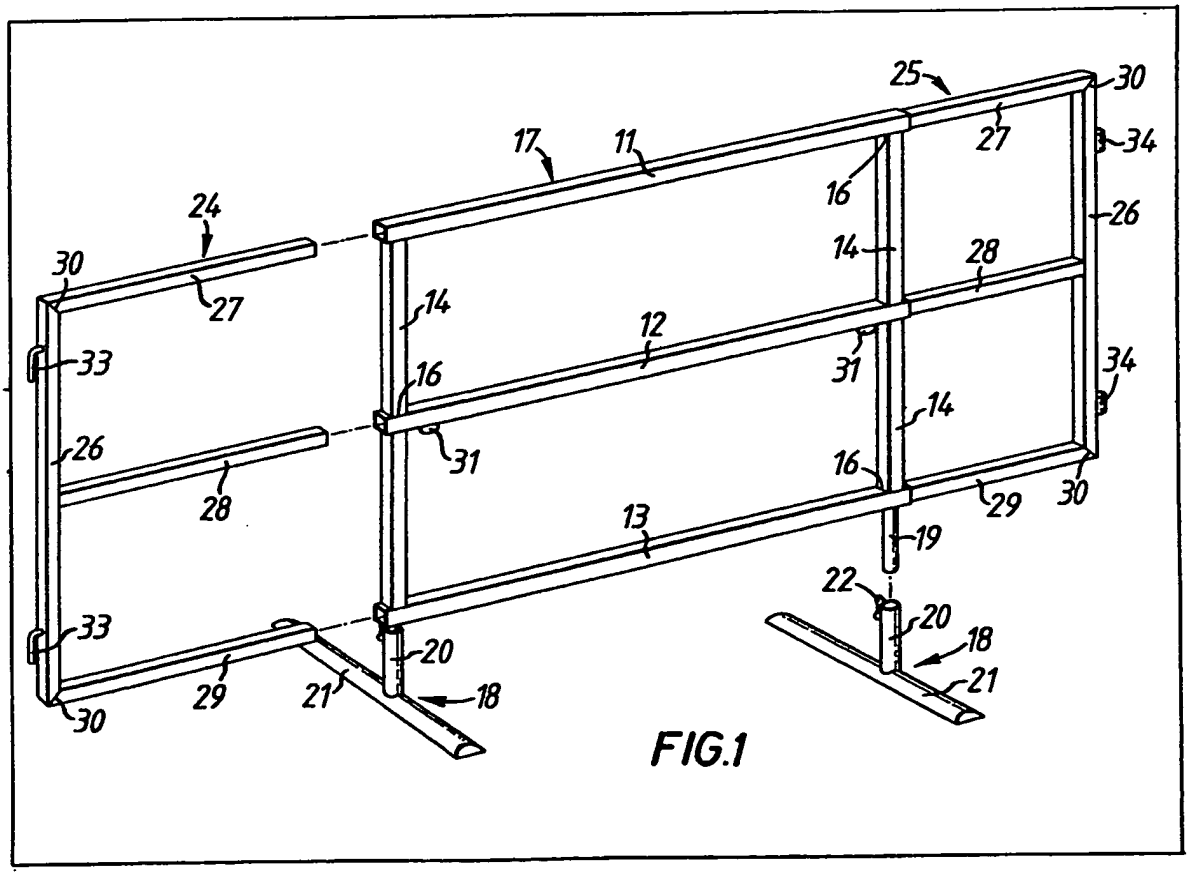

FIG.1

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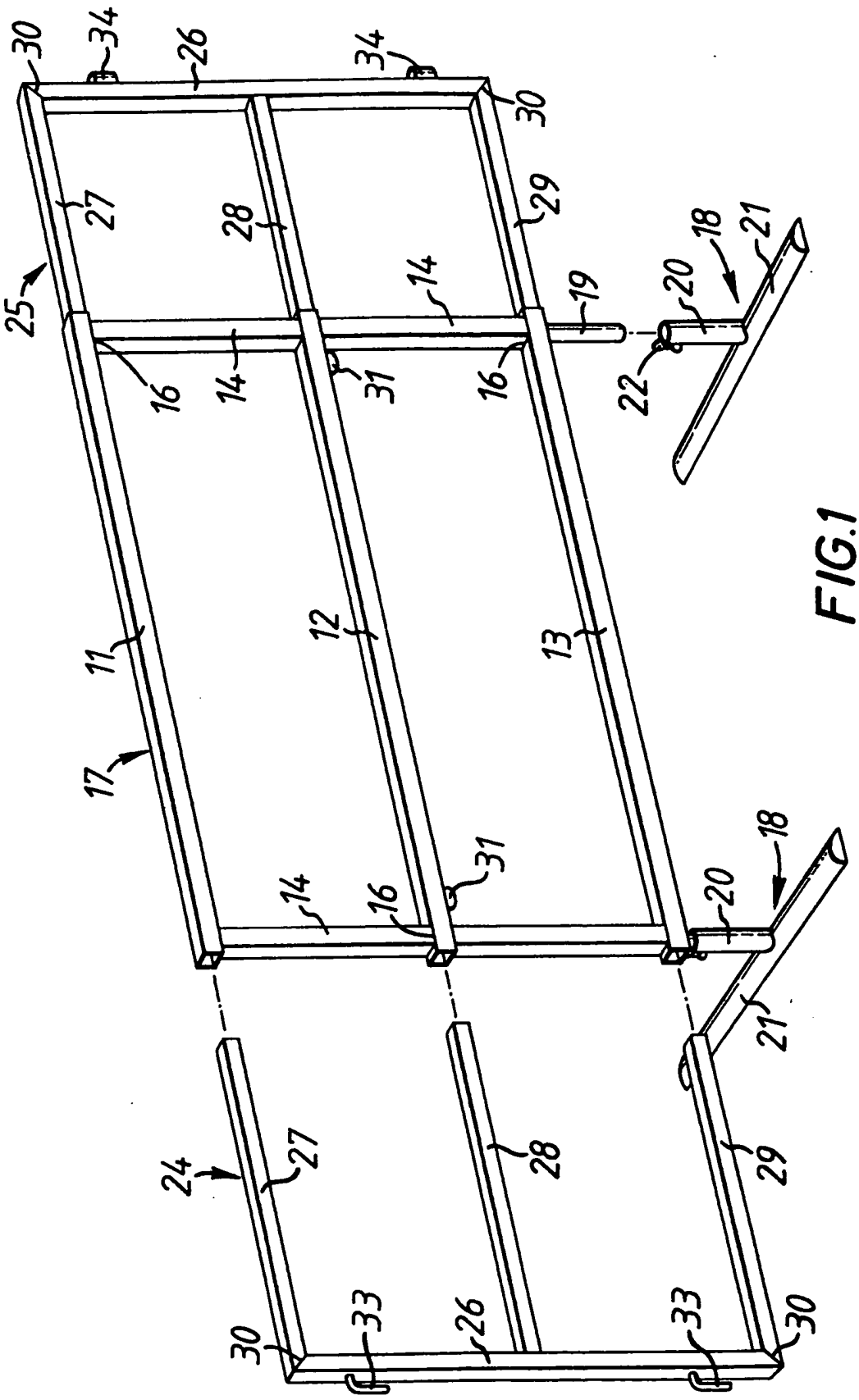
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FIG.1

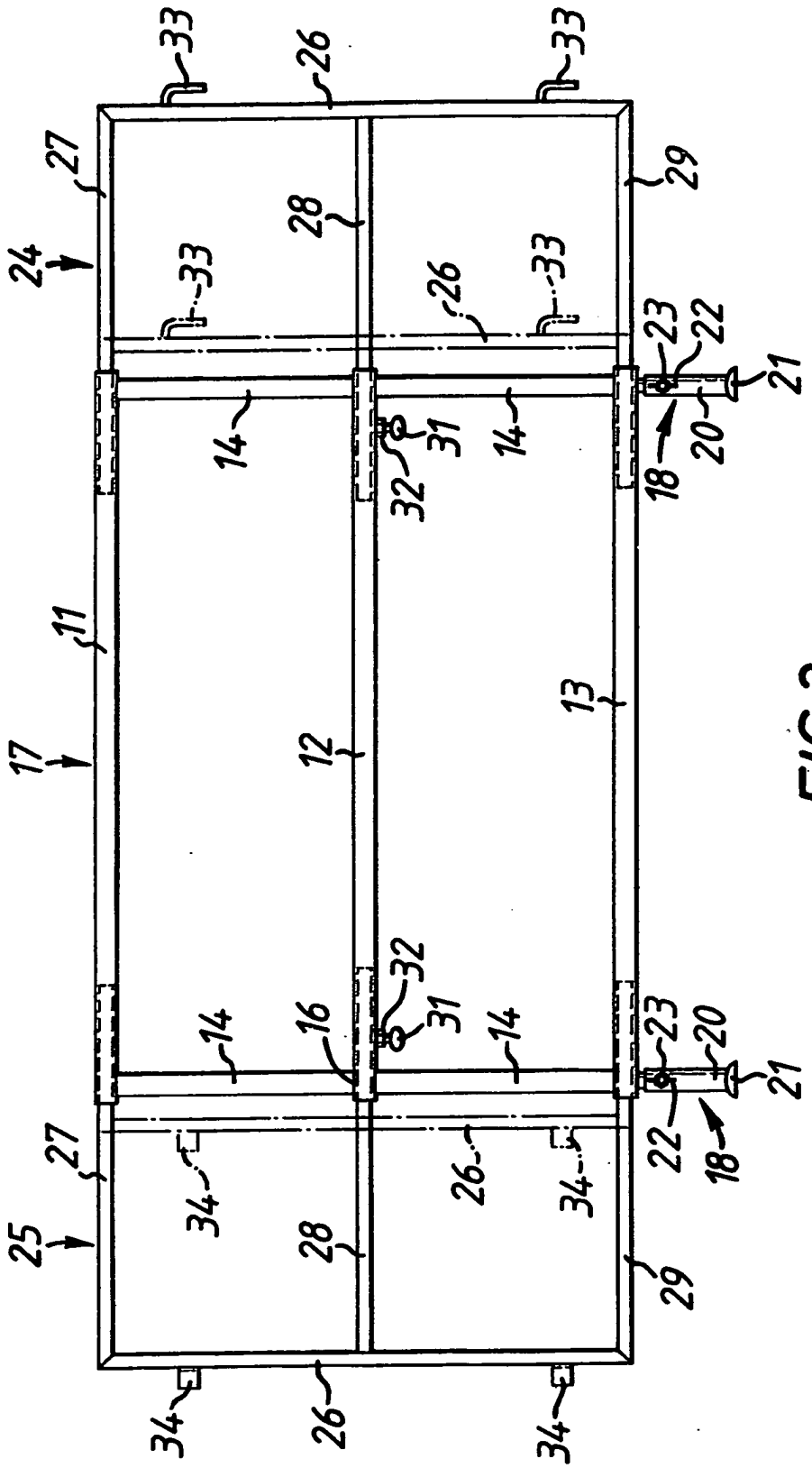
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FIG.2

SPECIFICATION
Barriers and like guards

This invention relates to units used as barriers or guards and which may be positioned separately or assembled end-to-end to form a barrier assembly for example to define a predetermined route or site area.

The present invention has for its object to provide a portable, lightweight barrier or guard unit which is adjustable in length so as to suit variable operating conditions.

The invention is primarily concerned with a portable barrier or guard unit in which a plurality of spaced horizontal members are interconnected by one or more upright members to form a main frame for the unit. According to the invention the length of the barrier or guard unit is variable by providing secondary frames which are fitted adjustably to the ends of the spaced horizontal members of the main frame.

In its broadest aspect the present invention provides a barrier or guard unit comprising a main frame and at least one secondary frame which is adjustable relative to the main frame so as to vary the length of the unit, wherein said main frame comprises a plurality of horizontal tube members which are held in spaced relationship by interconnecting upright members, and each said secondary frame comprising spaced horizontal members adapted to fit slidably within the horizontal tube members of said main frame.

The preferred embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:—

Figure 1 is a perspective view of the barrier or guard unit of the invention showing one secondary frame in its extended position and the other secondary frame separated from the main frame; and

Figure 2 is an opposite front elevation of the assembled barrier or guard unit showing alternative positions for the secondary frame.

The preferred barrier or guard unit in accordance with the invention consists of a plurality, for example, three horizontal members 11, 12 and 13 which are preferably metal tubes of rectangular cross-section but which may be of any other suitable cross-section such as circular. The horizontal tubes are connected in spaced relation as shown by short upright tubes 14 which interconnect the horizontal tubes but which are located so that the open ends 15 of the horizontal tubes project outwardly of the plane of the upright tubes 14 (see Figure 1). Each upright tube 14 is welded at its ends as at 16 to the corresponding horizontal tube 11, 12 or 13.

The assembly of tubes 11, 12, 13 and 14 provides a main frame 17 which if desired may support a mesh or other cover plate (not shown).

The main frame 17 is completed by a base assembly consisting of a pair of supports 18 in the form of adjustable feet units. Each foot unit comprises a tube 19 of circular cross-section which is welded at its upper end to the lower surface of the lowermost rectangular horizontal tube 13, preferably in the plane of the upright tubes 14.

The lower end of the tube 19 is adapted to fit snugly within the open end of a tube 20 welded at its lower end to a transverse foot bar 21 having a generally convex upper surface.

The foot unit 18 is therefore adjustable on the tube 19 both angularly and vertically so as to allow for adjustment of the height of the barrier or guard and also to allow variations in the positioning of the bar 21 to suit particular locations.

Each foot unit 18 is retained in a desired position in relation to tube 19 by a thumb screw 22 which is threadably mounted in a nut 23 welded externally of tube 20 and which enables the screw 22 to engage the outer surface of the tube 19.

In accordance with the invention the barrier or guard unit is also adjustable lengthwise to suit operating requirements. The length of the unit is varied by providing secondary frames which adjustably fit the open ends 15 of the horizontal tubes of the main frame 17.

The secondary frames are shown in the drawings by the references 24 and 25 and they each comprise an upright end tube 26 of rectangular cross-section and to which three horizontal tubes 27, 28 and 29 are welded as at 30 so that the horizontal tubes are spaced apart a distance which will enable them at their free ends to fit slidably within the open ends 15 of the corresponding tubes 11, 12 and 13 of the main frame 17. The telescopic engagement of the horizontal tubes of the secondary frame in the tubes of the main frame enables the length of the barrier or guard unit to be varied by adjustment of one or both secondary frames.

Each secondary frame 24 or 25 is held in position by a thumb screw 31 which is threadably mounted in a nut 32 welded externally on the undersurface of the central horizontal tube 12 of the main frame 17. The secondary frames 24 and 25 can be locked in a desired adjusted position by the thumbscrews 31 and in Figure 2 the secondary frames 24 and 25 are shown in full lines in an extended position relative to the main frame 17 so as to lengthen the barrier or guard unit, and in chain lines to indicate a closed position in which the barrier or guard unit has been reduced to its shortest length.

The barrier or guard unit is finally completed by providing the secondary frames 24 and 25 with connecting means which enables a number of units to be assembled together to form a continuous barrier assembly. As shown the secondary frame 24 is provided with two hooks 33 which are welded to the outer surface of the rectangular upright tube 26 of the frame, while the secondary frame 25 is provided with two rings 34 welded to the outer surface of the rectangular upright tube 26 of the frame.

In one preferred embodiment of the barrier or

guard unit the tubes of the frames were made of 16 gauge steel having a square cross-section, the tubes of the main frame having outer dimensions of 28.5 cms. square while those of the secondary frame have outer dimensions of 22.2 cms. square. The horizontal tubes of the frames were spaced apart 375 cms. and the lower circular tubes 19 were 130 cms. long fitting tubes 20 approximately 120 cms. long. In this embodiment the tubes of the main frame were 1050 cms. long and those of each of the secondary frames 550 cms. long.

If desired, the barrier or guard unit may be fitted with only one adjustable secondary frame.

CLAIMS

1. A barrier or guard unit comprising a main frame and at least one secondary frame which is adjustable relative to the main frame so as to vary the length of the unit, wherein said main frame comprises a plurality of horizontal tube members which are held in spaced relationship by interconnecting upright members, and each said secondary frame comprising spaced horizontal members adapted to fit slidably within the horizontal tube members of said main frame.

2. A barrier or guard unit as claimed in Claim 1, wherein the ends of the horizontal tube members of the main frame are open at each end and are adapted to receive slidably the corresponding ends of the spaced horizontal members of a secondary frame.

3. A barrier or guard unit as claimed in Claim 2, wherein the other ends of the spaced horizontal members of the secondary frames are interconnected by an end upright member.

4. A barrier or guard unit as claimed in Claim 3, wherein the end upright member of one secondary unit is provided on its outer surface with one or more hook members, and the end upright member of the other secondary frame is provided on its outer surface with one or more corresponding rings so as to enable barrier or guard units to be interconnected to form a continuous barrier assembly.

5. A barrier or guard unit as claimed in any one of the preceding claims, in which said horizontal members are all tubes of rectangular or square cross-section.

6. A barrier or guard unit as claimed in Claim 5, wherein at least one of the horizontal tube members of the main frame is provided with locking means for retaining each secondary frame in a desired position relative to said main frame.

7. A barrier or guard unit as claimed in any one of the preceding claims, wherein the main frame is provided with a base support having feet which are adjustable to vary the height of the unit.

8. A barrier or guard unit as claimed in Claim 7, wherein the lower horizontal tubular member of the main frame is formed with downwardly extending tube members each slidably fitting an upright tube attached to a transverse foot member.

9. A barrier or guard unit as claimed in Claim 8, wherein each base support foot includes locking means for retaining the downwardly extending tube member of the main frame in a desired vertical position in the corresponding upright tube attached to the foot member.

10. A barrier or guard unit substantially as described and as shown in the accompanying drawings.

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